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ABSTRACT

This collection of four policy papers on vocational assessment for the handicapped deals with personnel development, interagency coordination, current research and development, and providing individualized assessment services. Discussed in the initial paper on program improvement in vocational assessment for the handicapped are federal legislation concerning vocational education for the handicapped, the scope of vocational assessment and vocational evaluation, tools and models for assessment/evaluation, use of findings, inservice program development and implementation, technical problems of assessment, personnel preparation and selection, and agency coordination. Determining who should do vocational evaluation, identifying tasks necessary to the vocational assessment process, planning inservice training programs for evaluation personnel, and obtaining resources for delivering inservice training are the main issues examined in the second paper. Covered next are various aspects of assessing special education's responses to the career needs of handicapped youth (issues of school-based vocational assessment, establishing a structural basis for assessment, and facilitating the assessment process). Planning vocational assessment activities within educational settings having an interdisciplinary focus is the subject of the final paper. (MN)

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Vocational Assessment

Policy Paper Series: Document 6

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FOREWARD

The mid and late 1970's were characterized by the enactment of new major legislative mandates in the education and employment of handicapped individuals. Public Law 94-142 and Sections 503 and 504 of the Rehabilitation Act of 1973 have had profound effects upon educators and employers alike. In response to these mandates, a number of diverse programming approaches and policies have been implemented by vocational and special educators and vocational rehabilitation personnel at the state and local levels.

The Leadership Training Institute/Vocational and Special Education was established to assist state leadership personnel in improving and expanding vocational education opportunities for handicapped learners. The project is supported by a grant from the Division of Personnel Preparation, Office of Special Education, U.S. Education Department. Through the project, emerging legislative issues and priorities pertaining to vocational education for handicapped learners are addressed in regional leadership training institutes. By March 1981, eight institutes were conducted throughout the nation addressing a variety of key issues.

This series of policy papers on Vocational Assessment is a product of the sixth Leadership Training Institute which was held in Seattle, Washington, on October 12-14, 1980. A comprehensive literature review and a participant needs assessment survey identified a number of major concerns related to vocational assessment such as personnel development, interagency coordination, current research and development, and providing

individualized vocational assessment services. Several of the papers included in this publication were prepared for the institute; others were prepared under the editorship of Dr. Robert A. Stodden of Boston College.

The LTI project is deeply indebted to Dr. Stodden for his leadership in the development of this excellent addition to the Policy Paper Series. Since 1976 Dr. Stodden has been actively pursuing a series of research, development, and training projects focused on improving systematic and effective programming for secondary-level adolescents with special needs. This series of papers addresses a number of concepts and issues that are pertinent for policymaking personnel concerned with the development and supervision of vocational assessment programs.

The contributing authors of this volume include: Dr. Gerald R. Schneck and William G. Stewart of the University of Wisconsin-Stout, Dr. Robert Ianacone and Ms. Dorothea M. Hiltenbrand of George Washington University, and Dr. Robert A. Stodden of Boston College (on leave: University of Hawaii, 1980-81). Their insightful and cogent policy papers will serve to improve both policy and practice for the field. Dr. David Brubaker of the National Rehabilitation Counseling Association, Dr. Ronald Fry of the University of Wisconsin-Stout, and Dr. Carolyn H. Bockhaut of the University of Hawaii reviewed and critiqued the papers prior to publication. Dr. Janet Treichel, Dr. James Greenan and Ms. Margaret Hensel of the LTI staff assisted in the production and dissemination of this volume.

L. Allen Phelps, Director
Leadership Training Institute/
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PREFACE

Since the advent of Public Law 94-142, the Education for All Handicapped Children Act of 1975, relationships between vocational assessment practices and vocational education programs have taken on increased significance. Mandates for the provision of appropriate, least restrictive educational services, have been interpreted to include vocational programming for the handicapped student. The designated vehicle for defining appropriateness of vocational placement and programming is mandated as the Individualized Education Program (IEP). The content of the IEP, as prescribed by P.L. 94-142, must include a statement of the present levels of educational performance of the handicapped student.

At appropriate developmental times in the student's education, the IEP statement of present functioning levels must include valid and reliable career/vocational information. The assessed career/vocational information should serve as a basis for student placement decisions (extent of participation in regular vocational training programs), goal and objective formulation and basic instructional accommodation to assist the successful participation of handicapped students in vocational classes. The existence of necessary information upon which to base the development of vocational education goals and objectives within the IEP, is dependent upon a valid and appropriate vocational assessment/evaluation process.

Thus, assessment/evaluation is the beginning point for planning an individualized program for a handicapped student. As designated by P.L. 94-142, evaluation procedures must meet the following standards:

- (a) Tests and other evaluation materials:

- (1) Are provided and administered in the child's native language or other mode of communication, unless it is clearly not feasible to do so;
 - (2) Have been validated for the specific purpose for which they are used; and
 - (3) Are administered by trained personnel in conformance with the instructions provided by their producer;
- (b) Tests and other evaluation materials include those tailored to assess specific areas of educational need and not merely those which are designed to provide a single general intelligence quotient;
 - (c) Tests are selected so that when administered to a child with impaired sensory, manual, or speaking skills, the test results accurately reflect the child's aptitude or achievement level or whatever other factors the test purports to measure;
 - (d) No single procedure is used as the sole criterion for determining an appropriate educational program for a child;
 - (e) The evaluation is made by a multidisciplinary team or group of persons, including at least one teacher or other specialist with knowledge in the area of suspected disability; and
 - (f) The child is assessed in all areas related to the suspected disability, including, where appropriate, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities. (Federal Register, 1977, pp. 42496-97)

The guidelines provided within the Federal Register do not make specific reference to vocational assessment procedures appropriate for handicapped individuals. Given the assessment considerations offered in the federal guidelines, state and local planners must decide and implement from a wide range of vocational assessment options. This series of policy papers will discuss several concerns and ideas for conducting vocational assessment activities with handicapped individuals.

Robert A. Stodden
Editor

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Program Improvement in Vocational Assessment for the Handicapped

by

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Introduction

Beginning in the early 1960's, significant changes were initiated in the manner by which society viewed and dealt with the needs of persons who were handicapped. These efforts were primarily brought about through enactment of federal legislation including: P.L. 93-112, the Rehabilitation Act of 1973; P.L. 94-142, the Education of All Handicapped Children Act of 1975; P.L. 94-482, the Education Amendments of 1976, Title II, Vocational Education; and more recently, P.L. 95-602, the Rehabilitation, Comprehensive Services and Developmental Disabilities Act of 1978. Through these and supplemental state legislation, attention has been directed toward the progressive inclusion of the handicapped in many aspects of mainstreamed society. These efforts have particularly focused on activities within the areas of vocational rehabilitation, special education, and vocational education.

Within each of the cited federal charges, procedures have been specified for the development of individualized service programs which are aimed at specific needs of a particular student or client. Once declared eligible for services, a program is developed by an IEP (Individualized

Education Program) team rehabilitation counselor (in the case of the Individualized Written Rehabilitation Plan) and the student or client. In order to better understand the functional characteristics and needs of the handicapped individual, a strong emphasis is placed upon the utilization of a variety of assessment procedures in the early stages of the development of a plan, and in the monitoring of the subsequent performance.

It was made quite clear that a range of diagnostic, academic and vocational skill training programs was a necessary part of public school curriculums. Further emphasis has also been given to the consideration of personal and social functioning of these individuals, which were important determinants of later employability and independent living. All of these considerations have placed weight on the development of comprehensive service programs, where individual needs are dealt with in an integrative and continuous manner to insure appropriate treatment until the person is able to participate and succeed independently (Thurlow, et al, 1978).

Although education and rehabilitation professionals had attempted in good faith to implement diagnostic-prescriptive planning prior to the enactment of legislation, difficulties were often encountered which resulted in litigation or disservice to the person requiring service(s). Five general areas within special education that led toward litigation were elaborated upon by Sabatino and Miller (1979). These areas all involved the use of tests or testing practices, specifically: the use of inappropriate tests; incompetent administration of tests or assessment practices; inadequate special education practices, interventions or treatments; lack of parental involvement; and stigma that is placed on the handicapped individual by the identification and assessment processes used. Although these aspects were attributable to special education programming, changes in the recent

legislation and procedures developed for the implementation of support services under vocational rehabilitation and vocational education have also raised these as concerns for these support programs (Brolin, 1976).

As alternative approaches to the measurement of functional characteristics and needs of the handicapped have been developed, the use of vocational assessment/evaluation as a viable service has gained ground in education and rehabilitation circles. Although numerous resources tend to deal with these as synonymous terms (Davis and Ward, 1978; Minnesota Division of Vocational-Technical Education, 1979; Petri, 1980), by accepted definitions they tend to differ with respect to their philosophic and goal orientations.

Vocational Assessment and Vocational Evaluation: Defined

Petri (1980) and the Council for Exceptional Children (Davis and Ward, 1978) have defined the term vocational assessment as follows:

Vocational assessment is a systematic process whereby students gain insight into their vocational potential--their abilities, interests and the work environment best suited to them. It is a continuous process in the public school, with some aspects of assessment taking place in the elementary grades. Student's abilities and vocational potential should be re-evaluated frequently as they progress through the various stages of vocational preparation. When a student is ready to be involved actively in the vocational assessment process and to make a tentative career choice, a comprehensive vocational assessment should be provided. In short, an assessment report should be developed to be used in planning the specially designed vocational education portion of the student's individualized education program (IEP).

Further, the process of vocational assessment as described here is found to be firmly grounded in the conviction that handicapped students have vocational potential which may lead to competence in any one of a number of areas from sheltered workshops to various levels of competitive employment (Petri, 1980). With this focus on the vocationally-oriented aspects of

the individual's life, concentration is placed upon those characteristics of the individual that have a direct or indirect bearing on vocational behavior (e.g. aptitudes, abilities, interests, personality traits, motivations, and concepts of self). A number of alternative assessment approaches are used including: medical, psychological, educational and social assessment data obtained during a special education evaluation; administration of selected standardized or locally developed diagnostic instruments to assess vocational aptitudes and interests; work sample assessment to evaluate potential for development of vocational skills; behavioral assessment techniques in a variety of situational settings; evaluation in exploratory shop settings; and vocational counseling to aid in determining the student's interests and potential career goals. These assessment components are selected for use based upon their appropriateness for a particular student. The outcome of the vocational assessment process is to determine the appropriate educational program for the student. In the case of vocational education, the goal is appropriate class placement and specification of required modifications and support services (Davis and Ward, 1978; Petri, 1980). Further, vocational assessment has been characterized as a multi-dimensional approach to assessment which

aids administrative and instruction staff in identifying appropriate training options, in making reasonable program accommodations and ultimately guaranteeing each handicapped and disadvantaged person due process and the right to pursue and maximize their vocational potential (Minnesota Division of Vocational-Technical Education/Special Needs Unit, p. 11).

Although many of the critical components of a comprehensive assessment process for school-based programs appear to be present in this definition and specification of goals, important gaps appear when they are compared with the definition and aims of the vocational evaluation process.

The Tenth Institute on Rehabilitation Services (1972) Study Group III defined the term vocational evaluation as follows:

Vocational (work) evaluation is a comprehensive process that utilizes work, real or simulated, as the focal point for assessment and vocational counseling to assist individuals in vocational development. Vocational (work) evaluation incorporates medical, psychological, social, vocational, educational, cultural and economic data to assist in the attainment of the goals of the evaluative process (Pruitt, 1977, p. 3).

This definition is similar to that specified for vocational assessment in that it attempts to identify the vocational potential (prediction) of the handicapped individual. However, it also adds emphasis to the treatment aspect of the process in that it aims at aiding the individual in his/her vocational development. Vocational development in this context includes work activities and the social, cultural, economic, medical, and psychological aspects of a person's life--a comprehensive view of the person. Although the same assessment components exist in both definitions, the goals are broader with vocational evaluation than those of vocational assessment. A concern must arise when dealing with the application of these approaches in educational settings--Are we assessing purely for prediction of the student's success in specific programs? Or, are we assessing both to determine an appropriate service program to enable the student to expand his/her life opportunities and abilities? If compliance with the intents of recent legislation is to be achieved for the handicapped, it must be contended that we follow a broader aim than just pure assessment for placement. Failure to do so can easily lead to continued negligence towards the handicapped by restricting their vocational and life options. By following the broader perspective, we can hopefully achieve a fuller and more independent life for handicapped individuals through creation of alternatives and development of decision-making skills.

Although it is unrealistic to say that this will be achieved only during the vocational assessment/evaluation process, what better place is there to start in developing career options and decision-making skills for the clientele which we are presently attempting to serve? If in fact we were able to implement a service which would effectively aid in the vocational development of an individual, wouldn't this also be an activity of value even to the non-handicapped populace?

Tools of the Assessment/Evaluation Process

During the course of development of the vocational evaluation and vocational assessment processes in rehabilitation and education, numerous techniques have been borrowed from related fields. Neff (1966) has identified four different approaches that can be applied to the vocational (work) evaluation process: the mental testing approach; the job analysis approach; the work-sample approach; and the situational assessment approach. These approaches were developed from diverse fields, such as psychology and industrial settings, and resulted in a number of techniques that were utilized to assess individual functioning in a variety of settings. Each of the approaches were found to have positive and negative attributes: mental testing approach utilized standardized test instruments which were easily and cheaply administered, had respectively high reliability coefficients yet disappointingly low predictive validity coefficients; work-sample approach capitalized on the use of both work tasks and the standardization from the mental testing approach, yet tended to be expensive and time-consuming procedures which continue to have unresolved problems of reliability and validity; job analysis approach focused on actual tasks of the work setting yet was felt to be over-analytic in the analysis of tasks and overlooked human ingenuity in task performance or human

relations components; and the situational approach which focused on assessment in natural environments but offers difficulty in determining how situational and individual variables interact to produce the total behavioral effect exhibited (Neff, 1968; Dunn, Korn and Andrew, 1976).

Numerous instruments and procedures have been developed over the years which have aided professionals in conducting individual and group assessments for a variety of aims. The choice of method was found to depend to a considerable degree on objectives, with no one of these four methods doing everything since each deals with a restrictive facet of a many-faceted problem (Neff, 1968).

Some of the technology which has been developed for use in vocational assessment/evaluation has included: job analysis; interviewing; behavior observation procedures; aptitude, ability, interest and personality testing; work sample testing; job site evaluation; trial training assessment; simulated job station assessment; medical examinations (general and specialist); and physical capacities evaluation (VEWAA, 1975; VEWAA, 1978; Minnesota Division for Vocational-Technical Education, 1979; Brolin, 1976; Petri, 1980).

Models of Vocational Assessment and Vocational Evaluation

As is the case with the multitude of tools available, there is an ever increasing number of models by which the vocational assessment or vocational evaluation processes may be viewed. These models aid in specifying the processes used to operationalize vocational assessment in real environments--school or rehabilitation facility settings or in the comprehensive service program offered through an agency. Brolin (1976, 1978), Albright, Fabac and Evans (undated), Davis and Ward (1978), Schalock and Karan (1978), and the Vocational Evaluation and Work Adjustment

Association (1975, 1978) are but a few of the numerous model providers who have attempted to describe the relationship of vocational assessment/evaluation to larger service delivery systems. In many cases, an integrated approach is advocated so that continued monitoring of individual performance and feedback on progress can be maintained. However, frequently the actual implementation of the vocational assessment/evaluation process is limited to a matter of days or weeks, and is conducted in an isolated setting, with the information being provided on the individual in only an episodic manner. This is readily evidenced in the stress being placed on development of vocational assessment/evaluation centers, rather than improving the lines of communication between personnel and utilization of appropriate assessment technology directly in classroom settings. Implementation of these assessment practices in actual classroom settings would allow us to observe student or client behavior under real situational criteria which we can only attempt to simulate in a center or segregated classroom.

Use of Findings in Service Program Development and Implementation

The Vocational Evaluation and Work Adjustment Association in their state of the art project (1975) found that:

There is an increasing body of research evidence to indicate that vocational evaluation differs from other clinical assessment processes in that it improves (client) functioning. Yet this remains a neglected area and is often overlooked in program planning and development in vocational evaluation.

Beyond this obviously important but neglected factor, it found that through the vocational evaluation process

both the referring agent (rehabilitation counselor in most cases) and the client should directly benefit from the increased information in a way which facilitates their joint development of a plan of action (p. 33).

Taken in light of recent legislative mandates regarding the development of individualized education programs (IEPs), these factors are important to school personnel in that they reflect a developmental process which the student goes through to gain career awareness, develop options for career planning and provide opportunity to make decisions. The vocational assessment/evaluation process within schools should provide valuable information to those involved in IEP development/implementation activities, particularly the student. However, it cannot stop at a point of information provision, rather it must allow the student to experiment, explore and develop new skills which will in turn create new alternatives for program placement. Without allowances for this development to take place, we may be cheating individuals by making decisions based upon past or present performance before opportunity for further improvement of functional skills has taken place (i.e. making a prediction of optimal vocational placement for a student prior to participation in a vocational skill training program or provision of supportive services which may increase the student's actual functional capabilities).

With requirements of quality information and individual development being built into the process of vocational assessment/evaluation, the evaluation of the utility of outcomes becomes a much simpler task. Dunn (1969) stated that

the determination of the utility of a test or work sample (which are frequently used tools in the vocational assessment/vocational evaluation process) must take into account not only the validity of the test, but also the extent to which the test information can be used for a number of different decisions, the amount of unique information provided by the test, and the extent to which the test information permits the user to make clear choices.

Unfortunately, due to the special credentials and competencies required to administer certain assessment devices and synthesize/interpret assessment

information, we have frequently been required to depend on specialists to communicate the true meanings of the data which has been collected. Its application to school-based and rehabilitation settings requires that someone transform the empirical and behavioral information collected into a functional outcome--a prescription of appropriate service needs, required setting modifications, and so on.

At this time, significant research is taking place which is attempting to address critical questions regarding the vocational assessment/evaluation process in terms of the utility of information gathered, effects of the process on clients (students), improvement of technical aspects of assessment tools, and evaluation of the effects of the process in terms of rehabilitation outcomes. Institutions such as the University of Wisconsin-Stout, University of Arizona, Auburn University, Syracuse University, St. John's University, and the University of Oregon have addressed the improvement of methods to assess individuals who are handicapped. Although they all do not focus their efforts on vocational assessment or vocational evaluation, they have addressed tools and processes that are readily applicable to these approaches, such as: behavioral observation techniques; assessment of independent living skills of the severely handicapped; learning style assessment; and techniques to predict the rate of skill acquisition on a variety of simple to complex tasks. Unfortunately, dissemination of information about these developments continues to be limited. Significant improvements in vocational assessment/evaluation processes could be enhanced by better lines of communication between and within related human service fields.

This section has focused primarily on a general discussion of the present state of the art of vocational assessment and evaluation in the

fields of education and rehabilitation. The reader is encouraged to refer to the Vocational Evaluation Project: Final Report (VEWAA, 1975), the Davis and Ward (1978) publication through the Council for Exceptional Children, and the Minnesota Division of Vocational-Technical Education/Special Needs Unit (1979) document for a fuller discussion of developments, approaches and problems associated with the processes of vocational assessment and evaluation.

IDENTIFICATION OF PRESENT PROBLEMS

In the past, numerous concerns have been raised regarding processes and instruments utilized to assess vocational functioning. The utility and validity of information derived from assessment practices has been questioned during the past several decades, resulting in major controls being placed on their utilization in school and industrial settings (EEOC guidelines on the use of tests in personnel selection practices; P.L. 94-142's mandated practices on utilization of only assessment devices deemed appropriate to the individual student's functioning level and needs). Many of these difficulties still need to be resolved, resulting in continued questioning regarding the value and accuracy of the information obtained.

Outlined in this section are a few of the concerns and issues which are presently affecting the vocational assessment evaluation processes in the education and rehabilitation communities. Of particular interest in this partial listing are: the objectives of the process and its role in the service delivery program; present restrictions on the implementation of a comprehensive program; problems associated with particular assessment technology; personnel selection and training problems; use of assessment data and recommendations; on-going evaluation of the efficacy of assessment programs; information dissemination; and coordination of inter-and

intra-agency efforts. By no means is this listing to be viewed as all inclusive, exhaustive nor connote priority of the issues.

Objectives and Roles in Service Delivery Systems

Review of the literature has resulted in the identification of several objectives or roles which vocational assessment/evaluation addresses or serves in education and rehabilitation settings including: to measure individual capacities, interests and needs; to predict future outcomes in employment or training; to determine appropriate placement and situational modification; and to promote career development (Albright, et al, undated; Brolin, 1976; Brolin, 1978; Davis and Ward, 1978; Dunn, 1969; Dunn, et al, 1976; Larsen and Poplin, 1980; Neff, 1966; Petri, 1980; Pruitt, 1977; Sabatino and Miller, 1979; Schalock and Karan, 1978; Turnbull and Schulz, 1980; VEWAA, 1975; VEWAA, 1978).

- o Measurement -- This aspect describes the present levels of functioning and needs of the handicapped individual, including their: aptitudes; abilities; temperaments; interests; needs; physical capacities; values; socio-economic situation; independent living skills; and other work and work-related aspects of independent functioning (VEWAA, 1975; VEWAA, 1978; Davis and Ward, 1978). Unfortunately, the objectivity and validity of information that is derived from the various assessment techniques applied in vocational assessment/evaluation or other assessment processes has been limited, particularly in application to special populations such as the handicapped and disadvantaged (Dunn, et al, 1976; Schalock and Karan, 1978; Neff, 1966). Although numerous sources have advocated the modification of assessment tools to meet the particular characteristics of

the handicapped individual, little is known about the resulting effects.

- o Prediction -- Often, assessment devices are utilized to determine the potential of individuals when placed into a specific environment. In the case of vocational assessment evaluation tools, such as work samples and psychometric tests, prediction of the eventual success of the handicapped individual in a work environment is desired. To accomplish predictive aims, knowledge of the criteria required by the environment is mandatory. Typically, the criteria required in work environments is determined through job analysis and other techniques as applied to non-handicapped workers. Use of the resulting norms, based upon a work environment and non-handicapped workers, in a predictive mode may in fact be violating the mandated aims of present legislation. Within education, we may be striving to place the handicapped individual into an appropriate work situation, but only after we have placed him/her into an appropriate learning environment. We do not presently have criteria upon which to base predictions for success in learning environments (Dunn, 1969; Sabatino and Miller, 1979; Neff, 1966). In fact, no perfect predictor has yet been found (Dunn, 1969). Thus, as Sabatino and Miller (1979) have pointed out a predictive model of vocational assessment is discriminatory at best and all too often exclusionary.
- o Prescription -- Often, particularly in the case of individualized service delivery programs (IEPs and IWRPs), we are striving to select appropriate placements and modifications that will enhance

the skill and behavior acquisition of handicapped individuals. As in the case of the aim of prediction, the information acquired through assessment must be accurate and relevant for decision-makers. This can only be achieved through the use of appropriate norms or comparison standards, and if the information is presented in a format that can be utilized by the assessor, handicapped student or client, the IEP team, and those who will be involved in the actual treatment process (classroom teachers, support service personnel and parents) (Dunn, 1969; Sabatino and Miller, 1979). Too often, we have depended on specialists to assist in the interpretation of assessment outcomes into real-world applications.

- o Treatment Modality -- Brolin (1976 & 1978), the Vocational Evaluation and Work Adjustment Association (1975) and others (Schalock and Karan, 1978; Pruitt, 1977) have emphasized the importance of the vocational assessment/evaluation process as a treatment modality. Since these processes may include more than just assessment components (e.g. occupational information, decision-making and planning activities, etc.), their value to schools is easily seen. Social, moral, vocational and other skills are all developmental goals of the educational process. The use of vocational assessment/evaluation as an integrated part of this process, to provide expanded opportunities to make important decisions about present and future life roles, is necessary for many youths. Within the context of a school program, decisions can take place with minimal risk and support. However, in many settings the assessment component is stressed and the treatment

component neglected. As Dunn (1969) suggests, the most important measure of the effectiveness and utility of the vocational evaluation process is its benefits to the client (student)--particularly in terms of their enhanced growth in learning about themselves.

Implementation of the Vocational Assessment Process

In the translation of programmatic models into operational entities, implementers have unfortunately resorted to segregated models for the delivery of vocational assessment services (Phelps, 1980; Laski, 1979; Schalock and Karan, 1978). The plethora of attempts to create vocational assessment centers on local or regional bases raises issue with the value of approaches in terms of: cost of program development, time out of regular classes, transportation costs; utilization of information for development, or for classroom modification; extent of resources, and the efficacy of the program versus other alternatives that might be made available. Also, how frequently have vocational assessments/evaluations concentrated on the functional characteristics of the student (client), while skimming over the assessment of learning modes which are most appropriate for the student? At present, the assessment of learning styles methodology is in an early stage of development (McCray, 1979). It appears that learning style assessment and in-class transference of various technological aspects of the vocational assessment process could do much to provide more constructive information, while contributing to the development of the student in a more normalized setting (Schalock and Karan, 1978). Major findings of the Olympus Study (1974) and a study conducted by Schneck, Lerwick and Copa (1977), indicate that the use of special (isolated) classes are quite logical--since they ease the requirements to maintain fiscal accountability

as mandated for handicapped programs under federal legislation. However, there continue to be cries for increased enrollment of handicapped students in regular classes. An integrative approach toward vocational assessment could not only aid the handicapped student, but also would be of benefit to other students in their own career development.

Technical Problems of Assessment Procedures

Psychometric tests, work samples and behavioral observation techniques have been found to have continuing problems with reliability, validity and norming, particularly with the moderately and severely handicapped population (Dunn, et al, 1976; Schalock and Karan, 1978; Sabatino and Miller, 1979). Dunn (1969) points out that predictive validities for both tests and work samples used with the disabled and disadvantaged tend to be low while the costs of administration continue to be high. Further, he addresses the issue of information utility in that the information derived from a score itself depends largely upon the norms which are available. As a good rule of thumb, norms should be developed according to the decisions of the evaluator. If this is the case, why do we continue to compare the handicapped to employed workers or other handicapped persons who also do not have the prerequisite skills to compete when the performance was measured to develop the norm?

Other concerns in the use of present technology include: the limited availability of instruments which are presented in a number of languages or in various other modes of communication; the lack of provision of criteria by which to determine the appropriate personnel to administer it; the lack of instruments which are criterion-based performance measures rather than predictive measures; the lack of reporting procedures which would provide more than just a broad estimate of educational performance; lack of

reporting which is applicable to learner style and characteristics for the classroom instructor and support service personnel.

An important concern with present psychometric assessment technology is that most are developed from trait theories which assume that certain traits are unalterable (Schalock and Karan, 1978). An individual's performance is viewed as a reflection of his/her present and future capacities rather than realization that aptitudes, interests, abilities, and so-called other traits are not static, but are influenced by situational variables surrounding a person's learning experience.

Even if this realization is apparent, we continue to have problems which limit improvement of assessment technology including: very meager resources with which to field-test our procedures in actual (industrial or classroom) settings; inability to observe the client or student after they leave the evaluation setting; and the outcome criteria which we are continually forced to use tends to be a very crude measure (employment vs. non-employment; success or failure). In other words, genuine validation of evaluation procedure continues to be very inadequate (Neff, 1966).

Personnel Preparation and Selection

Sabatino and Miller (1979) point out that a historical lack of appropriate diagnostic systems has impaired the educator's ability, first, to design appropriate educational models, and second, to measure the effectiveness of the programs on specified youth.

With respect to the identification and assessment of handicapped individuals, it was found (Schneck, Lerwick and Copa, 1978) that considerable variation in expertise, information and technology is needed to identify persons using the various indicators of handicapped and disadvantaged conditions that are presently used in program implementation. Teachers

and other professionals have repeatedly used tests for purposes other than those for which they were designed (Schalock and Karan, 1979).

A study of vocational education instructors in Iowa (Phelps, 1980), is consistent with results from other inservice need assessments conducted around the country. The study indicated a major need for assessment and diagnostic skills was the highest inservice training priority for this group. Unfortunately, present preservice and inservice teacher education programs only skim the surface in dealing with individual assessment strategies if at all. There are only a few formal programs oriented toward vocational assessment/evaluation (University of Wisconsin-Stout, University of Arizona, Southern Illinois University, Auburn University, Syracuse University), although many more are in the process of development. Further, limited inservice opportunities for present instructional personnel are available, emphasizing improvement of integrated models, technical aspects of instrumentation, and utilization of results.

Dissemination of Vocational Assessment Information

Perhaps the greatest problem is that of communication, both within and between other fields interfacing vocational assessment. Although there are many resources available to the education and rehabilitation communities, their existence is not known to many people in the field. Of particular importance are: the Materials Development Center, University of Wisconsin-Stout, which is the national clearinghouse for the areas of vocational evaluation, work adjustment and facility administration within the rehabilitation community; the 20 Rehabilitation Research and Training Centers (in medicine, mental retardation, vocational rehabilitation, counseling, mental illness and deafness); and various research and demonstration projects, such as that being conducted on learning style assessment by

Dunn, R. and Dunn, L. at St. John's University. These information resources are all vital to continued development and present operations of the field.

Inter-/Intra-Agency Coordination and Vocational Assessment

Requests by the U.S. Office of Education and Rehabilitation Services Administration (Boyer and Humphreys, 1977; Boyer, et al, undated) have called for coordination and cooperation between vocational education, special education and vocational rehabilitation agencies. Included in the types of services and activities on which the agencies were encouraged to cooperate were those related to student/client identification and assessment. However, we continue to have problems in coordinating services within and between agencies (Phelps, 1980; Schneck, Lerwick and Copa, 1978) which hamper the provision of continuity and full service offerings.

NEEDS OF THE FIELD

Dr. Kenneth B. Hoyt (Tesolowski, 1980; VEWA, 1975) challenged the field of vocational evaluation to:

develop instruments and procedures that are: (1) more consistent with the programmatic structure of vocational evaluation; (2) useful for junior high school age pupils; (3) practical to use with large numbers of individuals; and (4) specifically applicable to vocational education.

Dr. Hoyt was very critical of vocational evaluation procedures developed under a vocational rehabilitation philosophy which are not practical for use with large numbers of students. He cited the cost limitations imposed by systems. . . and denounced any further proliferation of vocational evaluation programs that require several days for completion. He was not able to specify the characteristics of subgroups among the student body that would warrant this costly kind of job exploration endeavor.

The general subject of using more expensive technologies as a second resort was discussed. Dr. Hoyt pointed out the need for measures which will predict training success as well as outcome success. He was familiar with the problem faced by vocational education in that conventional normative testing is selective rather than useful in guidance (pp. 153-154).

Orelove (1978) in addressing the needs and concerns of school administrators suggested the following need considerations:

There is a need to provide service in a regular rather than episodic manner. Thus, assessment, intervention, and follow-up are a part of an ongoing system.

The need to follow an integrative rather than isolative therapy model, whereby assessment and therapy are implemented in the classroom and in the (child's) natural environment.

The necessity to work cooperatively with parents, including involving them in program planning and implementation and providing inservice activities to enable them to handle difficult medical or behavior management problems.

Considering the concerns of Orelove (1978) and Hoyt (VEWAA, 1975; Tesolowski, 1980), the field of vocational assessment/evaluation and their parent fields (vocational education, special education, vocational rehabilitation) have numerous tasks to undertake, including:

- o Provision of expanded research funding in this priority area
- o Increased and more effective information dissemination efforts
- o Provision of baseline, needs assessment studies to determine significant problems in vocational assessment/evaluation
- o Provision of research designs for research or development efforts
- o A need to integrate and build upon research and related disciplines, most notably the fields of vocational rehabilitation, special education and vocational education
- o Evaluation of learner assessment practices and their effects on handicapped learners
- o Development of functional diagnostic procedures to identify unique learning needs of special populations
- o Mandates for accountability on projects which would require dissemination and integration provisions
- o Requirement of program evaluation of assessment efforts, to assess cost-benefits/effectiveness, degree to which services are provided, determine utilization of recommendations, identify problems in serving special populations, and to provide input into improvement needs in federal and state legislation and regulations

- o Provision of much needed technical assistance to federal, state and local education agencies particularly targeting on vocational assessment/evaluation and its utilization in individualized service programs (IEPs and IWRPs)
- o Increased involvement of colleges and universities in preservice and inservice, dissemination, and research development and design activities, particularly as technical advisors to federal, state and local agencies
- o Increased utilization of parents as assessment and treatment resources in the educational process. This includes provision of appropriate training, consultation and followup as they become more involved in the provision of direct services to their child
- o Provision of alternative methods of skill development for professionals, including: internships; apprenticeships; individualized instructional packages; cross-disciplinary training; etc.
- o Integration of the vocational assessment/evaluation process into the agency's overall program, so that the results of the unified process (along with remediation) can be used for evaluating the program's goals, objectives and outcomes
- o Develop techniques for analyzing learning environments that are useable by classroom instructors
- o Develop functional assessment systems that would be of use in identifying appropriate services

(Sabatino and Miller, 1979; Phelps, 1980; Schneck, Lerwick and Copa, 1978).

SUMMARY

Dr. Kenneth Hoyt (VEWAA, 1975; Tesolowski, 1980) when asked to provide a state of the art description of the status of vocational education, vocational evaluation and vocational guidance up to the mid-1970's, stated that:

Vocational evaluation and vocational guidance for students who come into vocational education programs is made difficult by a number of complicating factors. First, many students enter vocational education not because they have clearly chosen it but because they have either rejected, or been rejected by, the other elements of our educational system. They often lack any clear notion regarding career goals.

Second, the numbers and variety of vocational-technical-occupational training areas are increasing rapidly. Students at a very young age have to make fairly specific choices among training programs.

Third, few schools offer adequate career exploration activities for junior high students even though those individuals are at an age when initial choices are considered and often made.

Fourth, almost all schools lack the hands on means by which all students may be exposed to the range of occupations.

As a national movement, efforts have been promulgated to increase the career exploration and vocational training provisions to youths at earlier ages. Along with this movement career development programs for special needs populations continues to be an emerging national priority. With this move toward improving the career opportunities and vocational education of the handicapped has come a need to understand the functional educational needs of special students prior to instructional planning (Phelps, 1980). As the field of vocational assessment/evaluation develops to meet this need, we will continue to experience problems and challenges which will hopefully make it a stronger, more objective and integral part of manpower development programs in education and rehabilitation.

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Inservice Staff Development in Vocational Assessment for the Handicapped

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Legislation enacted through the last several decades has focused an increased amount of attention on the needs and rights of persons who are handicapped. Some specific legislation that has dealt with the provision of services to handicapped people, includes: P.L. 93-112, The Rehabilitation Act of 1973; P.L. 94-142, The Education of All Handicapped Children Act of 1975; P.L. 94-482, The Education Amendments of 1976, Title II, Vocational Education; and P.L. 95-602, The Rehabilitation, Comprehensive Services and Developmental Disabilities Act of 1978. One intent of these pieces of legislation has been to put in place a mechanism that would assist the disabled/handicapped citizen movement into a more meaningful, fulfilling relationship with the mainstream of American society.

Historically, in education, vocational guidance and counseling, and vocational rehabilitation, some significant problems have been the determination of: (1) where a particular individual with a disability or handicap can best find some degree of satisfaction in the realms of work, education and independent living and (2) finding means of developing and maximizing their functional capabilities in the above areas and in other areas of society. The determination and accomplishment of life and vocational goals is

far more complex when related educational and guidance efforts must also consider severe disabilities and societal attitudes toward disabilities.

For many years this two-fold problem has been one addressed by vocational rehabilitation agencies with adult populations. However, due to recent legislation and changes in philosophy, educational institutions must play a more active role in what might be described as preventive vocational rehabilitation/habilitation services. This means that we must attend to the needs of disabled/handicapped people at an earlier age. Schools therefore must take a more active role in: (1) the process of assessment and evaluation to determine appropriate vocational, educational and independent living goals, and (2) service delivery models whereby goals of disabled students can be more adequately met.

INSERVICE TRAINING

As this new emphasis has increased, new problems have surfaced for educators. Only a limited number of professionals are adequately trained in vocational assessment/evaluation; thus personnel with the specific competencies necessary to conduct this kind of evaluation are in extremely short supply. Most preservice training programs in special education and vocational education do not adequately prepare students for conducting vocational evaluation. Application of vocational evaluation competencies, on a problem solving level, are not a part of their core curriculum. As a result, there is a desperate need for professionals with the expertise to perform quality and meaningful vocational evaluation and assessment activities. Since so very few trained professionals are available, many practitioners have been moved from other, often unrelated fields of education; there is often much to be learned by these new entry practitioners. There is a need for inservice staff development strategies which will

insure that these essential vocational evaluation activities will be carried out on a professional level.

DEFINITIONS

It is important before one develops inservice strategies that there be some consistent definitions as to what is vocational evaluation/assessment. Petri (1980) and the Council for Exceptional Children (Davis and Ward, 1978) have described vocational assessment as follows:

Vocational assessment is a systematic process whereby students gain insight into their vocational potential, their abilities, interest and the work environment best suited to them. It is a continuous process in the public school, with some aspects of assessment taking place in the elementary grades. Students' abilities and vocational potentials should be re-evaluated frequently as they progress through the various stages of vocational preparation. When a student is ready to be involved actively in the vocational assessment process and to make a tentative career choice, a comprehensive vocational assessment should be provided. In short, an assessment report should be developed to be used in planning a specially designed vocational education portion of the student's Individualized Education Program (IEP). The Vocational Evaluation and Work Adjustment Association (VEWAA, 1975) defined the vocational evaluation process as follows: A comprehensive process that systematically utilizes work, real or simulated, as the focal point for assessment and vocational exploration, the purpose of which is to assist individuals in vocational (career) development. Vocational evaluation incorporates medical, psychological, social, vocational,

educational, cultural, and economic data to assist in the attainment of the goals of the evaluation process.

The VEWAA report goes on to cite its basic objectives in the provision of vocational evaluation services:

1. Identify an optimal functional outcome for the individual.
2. Identify the functional competencies and disabilities of the individual.
3. Identify those services needed to overcome functional disabilities which limit optimal functional outcomes.
4. Reduce or eliminate functional disabilities of the individual.

The end product of these particular objectives is that the individual will achieve:

1. Optimal vocational functioning level.
2. Optimal degree of functional independence.

The VEWAA definition sufficiently corresponds with the needs and emphases of mandates for vocational assessment directed toward educators. The specific objectives are also in line with the above mandates.

One important point that is often overlooked regarding the delivery of vocational evaluation/assessment services is that it is designed to facilitate the career development process. It is not a single point in time occurrence that once completed need not be addressed again. The evaluation process should be implemented in such a way so that it regularly provides individuals with new information concerning their abilities, capabilities, alternatives and assets/limitations. Evaluation also must address the needs of service providers such as teachers, counselors, and job placement people, so that appropriate services can be provided, based on that individual's specific needs.

WHO SHOULD DO VOCATIONAL EVALUATION

One great benefit that we have in looking at the provision of comprehensive vocational evaluation services is that specific competencies for these personnel have been identified (Coffey, 1978). It is important when looking for school personnel to provide vocational evaluation services, that individuals are sought who clearly own these particular competencies, rather than individuals who are able only to use portions of vocational evaluation technology. Vocational evaluation/assessment is much more than the administration of work samples and other assessment techniques and measurement devices. As noted by the definitions cited, the competent evaluator must be knowledgeable in vocational rehabilitation/habilitation process, theories of assessment and work adjustment, the labor market, and skilled in using assessment devices, and applying tools and techniques for analyzing and synthesizing job and person related information.

Coffey (1978) identified high priority competencies. There may be some question as to whether or not all his lists of competency statements should be called competencies, but they are important for a fully trained evaluator. Some of the high priority items found in his list of 175 are as follows:

1. Write evaluation reports which emphasize client's strengths and needs.
2. Create an atmosphere which promotes positive (as opposed to negative) communication and working relations with clientele, staff and other personnel.
3. Function as an effective member of the professional rehabilitation team.
4. Make logical job, work area, or training recommendations based upon client, job, and training information.
5. Use appropriate levels and kinds of words (in communicating) for the receivers of the communication (i.e., clientele, peers, consumers, and administrators).

6. Determine that what has been communicated is correctly understood.
7. Select possible jobs for consideration with clients by comparing client interest, job requirements, and client worker trait characteristics.
8. Demonstrate an ability to adapt to and cope with frustrations, special needs, and inconsistent behavior in others.
9. Demonstrate an understanding of intellectually limited and emotionally disturbed clients.
10. Monitor and report significant client information to other rehabilitation workers.
11. Describe and compare knowledge, skills, procedures, and tools that are important for a vocational evaluator in order for him or her to do high quality work.
12. Communicate with clients who lack or have limited communication skills.
13. Relate the evaluation report to needs of clients, education, the labor market, and other receivers of the report.
14. Maintain your own good mental health.
15. Select and administer appropriate work samples and/or systems in light of individual client needs.
16. Use job analysis, occupational information, disability information, and client information in counseling with the client.
17. Improve decision making by using knowledge and skills available from other team members.
18. Describe client adjustment problems using observable and measurable terms.
19. Work in cooperation with rehabilitation workers and other disciplines.
20. Note and record significant behavior clues and symptoms which are important in vocational planning.

The competencies listed here are the 20 highest rated statements; however, they are more meaningful in study and application as they were originally listed (Coffey, 1978) under broader categories of: professional background, relating to and working with other professional workers,

initial evaluation procedures, determining vocational direction, analysis and synthesis of evaluation data, communication, adjustment, referral and placement and administration.

In addition to the above competencies, Stewart and Langton (1979) surveyed practitioners whose primary responsibility was the provision of comprehensive vocational evaluation services in school settings. As a result of that inquiry, ten primary tasks were identified by the majority of those persons responding. Similar findings were noted by Ellsworth and Noll (1978).

After identification of those major tasks involved in doing vocational evaluation in school settings, an attempt was made to isolate specific competencies required to perform each individual task. The following is a composite of those tasks and the competencies associated with each:

Task I: Complete Individual Vocational Evaluation Plans With Students

Competencies required to perform task:

1. Knowledge of decision making and problem solving.
2. Knowledge of work functioning requirements.
3. Knowledge of basic vocational assessment techniques.
4. Ability to develop and write verifiable vocational hypotheses/questions.
5. Ability to gather, analyze, and incorporate student background information into the evaluation process.

Task II: Utilize Vocational Evaluation Data in Formulating Vocational Goals, Planning School Curriculum, Establishing Individual Education Program (IEP), etc., for Individual Students

Competencies required to perform task:

1. Knowledge of job requirements and potential modes of job and vocational training.
2. Knowledge of individual educational planning.

3. Knowledge of school curriculum resources.
4. Ability to analyze and interpret vocational evaluation data.
5. Knowledge of decision making strategies.

Task III: Select and Administer Appropriate Vocational Evaluation Techniques/Tools

Competencies required to perform task:

1. Knowledge of vocational evaluation techniques including:
 - Psychometric tests
 - Work samples
 - Simulated job stations
 - Situational assessment
 - Community based vocational assessment
2. Knowledge of relationship between specific assessment techniques and specific jobs, occupational areas, training requirements, career implications, etc.
3. Knowledge of functional characteristics/needs of student population.
4. Knowledge of work/occupational requirements, trends, etc.

Task IV: Utilize Observational Techniques to Obtain Information Regarding Student's Functional Assets and Limitations

Competencies required to perform task:

1. Knowledge of observational techniques.
2. Ability to systematically observe and record work performance and work behavior.
3. Knowledge of relationship between work requirements and worker attribute.

Task V: Improvise Simulated Work Tasks/Situations

Competencies required to perform task:

1. Knowledge of work simulation.
2. Knowledge of occupational information.

3. Knowledge of work sample development.
4. Ability to use existing resources to innovate vocational assessment tasks.
5. Knowledge of school/community resources for use in task development.

Task VI: Assist Students in Vocational Exploration Activities

Competencies required to perform tasks:

1. Knowledge of occupational information resources and vocational exploration systems.
2. Knowledge of principles of career development.
3. Knowledge of community resources, manpower information, etc.

Task VII: Utilize Community Resources to Supplement Existing School

Programming

Competencies required to perform task:

1. Knowledge of community resources.
2. Knowledge of specific services and resources provided by community agencies, etc.

Task VIII: Communicate Vocational Evaluation Findings and Recommendations to Involved and Interested Parties

Competencies required to perform task:

1. Ability to organize and prepare data for oral presentation (staffings).
2. Ability to communicate ideas and data in a clear concise written manner (vocational evaluation report).
3. Ability to synthesize data (vocational, educational, community, psychological, physical, and personal-social) into relevant recommendations (student plans).

Task IX: Relate and Explain Vocational Evaluation Process to Administrators, Teachers, Parents, Students, and Other Interested or Involved Groups

Competencies required to perform task:

1. Ability to prepare materials for presentation to different involved groups.
2. Awareness of special application of vocational evaluation process, techniques, etc., in a school setting.
3. Knowledge of specific federal and state legislation dealing with implementation, funding, etc., of special needs student programming.
4. Knowledge of how vocational evaluation differs depending on environment, etc.

Task X: Develop/Plan/Implement a School Based Vocational Evaluation

Unit/Program

1. Knowledge of pertinent community resources (career development).
2. Knowledge of potential school resources related to vocational evaluation services.
3. Knowledge of training and work requirements (occupational information).
4. Knowledge of vocational evaluation process, tools and techniques.
5. Knowledge of relevant school considerations (i.e., space, funds, schedules, manpower/personnel resources, etc.).
6. Knowledge of means of assessing student career development needs.

Scelfo and Micali (1978) portrayed the vocational evaluator in educational settings in a similar manner as illustrated by the following excerpt:

The Vocational Evaluator in Education

<u>Has a Knowledge Of</u>	<u>Is Trained To</u>	<u>Understands</u>
History and philosophy of vocational evaluation	Select appropriate work samples	How the following affect the student:
Theory of vocational evaluation	Administer work samples	Psychological conditions
Occupational information resources and Occupational Classification System	Interpret work samples	Behavior disorders
The world of work	Use and record behavioral observations	Economic/cultural deprivation
Worker characteristics	Write comprehensive vocational assessment reports	Medical conditions
Disabilities and their physical and psychological characteristics		Theories of: Vocational development, personality, learning, and human development
<u>Assesses Student Strengths and Weaknesses Through Use Of</u>	<u>Has the Ability To</u>	
Student's educational history	Carry out student orientation to vocational evaluation	
Student's medical history	Relate to students of diverse backgrounds and values	
Student's psychological history	Motivate and support individual student while in evaluation	
Student's social history		
Dictionary of Occupational Titles		
Major types of vocational assessment systems		

Figure 1

It is upon these identified tasks and related competencies that a comprehensive inservice training program should be developed. The particular model (Ellsworth & Noll, 1978) on which the vocational evaluation/assessment component is focused, whether it be the classroom-based, comprehensive vocational evaluation unit (isolated) or the extended evaluation format which combines assessment and training, requires similar tasks to be conducted by the evaluator and, thus, implies competencies such as those discussed earlier.

INSERVICE TRAINING PROGRAMS FOR VOCATIONAL EVALUATION/ PERSONNEL

In developing this paper, a number of states were contacted regarding current plans for initiating effective, cooperative inservice training strategies for state level and LEA personnel regarding the provision of vocational evaluation/assessment services in schools. None of the states had developed specific strategies for inservice personnel preparation so that assessment and evaluation competencies could be developed for those persons involved in the provision of these services.

The state of the art indicates that currently the function of vocational evaluation/assessment is being undertaken primarily by educators with little or no preparation, of either a preservice or inservice nature. However, a number of persons already employed by LEAs are capable of providing appropriate educational services and opportunities for students with special needs.

What is needed is a comprehensive, cooperative, statewide effort on the part of educators to insure that those individuals responsible for these services receive adequate training, preparation, and supervision to insure the delivery of quality services to our youth.

At best, current efforts appear to be reactive, sporadic, and lacking a concerted, cooperative effort to insure that vocational evaluation services are provided to facilitate the career/vocational development of those citizens in our schools possessing special needs. Educational leaders, along with practitioners (those providing vocational evaluation/assessment services), need to arrive at a common definition of what constitutes vocational evaluation services, and develop consistent, coordinated strategies so that its implementation can:

1. Assist students in establishing realistic, vocational goals that reflect the student's functional capabilities.
2. Facilitate the student's understanding of their vocational and educational capabilities by offering them the opportunity to experience, in a hands-on fashion, their skills, abilities, etc.
3. Facilitate the career decision making and planning process of special needs students.
4. Assist students in identifying pertinent and relevant services that are necessary for them to achieve their goals.

In addition to state and local administrators and individuals at the local level who are responsible for providing evaluation services, it is essential that teachers (vocational education, special education), parents, students and the community are made aware of the evaluation process and its potential to facilitate meeting the educational and vocational needs of students with special needs. If evaluation services are to become an integral, functional part of the school's curriculum and/or program, it is imperative that these groups understand the function of vocational evaluation, as well as its potential benefits.

POTENTIAL RESOURCES FOR THE DELIVERY OF INSERVICE TRAINING
REGARDING VOCATIONAL EVALUATION/ASSESSMENT
FOR THE HANDICAPPED

According to a recent publication from the Materials Development Center (1980) entitled "Training Programs in Work Evaluation, Adjustment and Facility Management," there are a great number of university programs and private non-profit concerns providing instruction and short-term training activities in the area of vocational evaluation. Some of the programs are located at:

1. University of Arizona--Tucson, Arizona
2. Auburn University--Auburn, Alabama
3. University of Georgia--Athens, Georgia
4. North Texas State University--Denton, Texas
5. Southern Illinois University--Carbondale, Illinois
6. University of Missouri--Columbia, Missouri
7. Central Missouri State University--Warrensberg, Missouri
8. University of Wisconsin-Stout--Menomonie, Wisconsin
9. University of Texas Health Science Center--Dallas, Texas
10. Assumption College--Worcester, Massachusetts
11. Institute for Crippled and Disabled--New York, New York
12. University of Maryland--College Park, Maryland
13. Jewish Employment and Vocational Services--Philadelphia, Pennsylvania
14. Vocational Guidance and Rehabilitation Services--Cleveland, Ohio

These are all potential resources which should be considered in developing inservice training assistance in the area of vocational evaluation services. Other informational resources include:

1. Materials Development Center (M.D.C.)
Stout Vocational Rehabilitation Institute
University of Wisconsin-Stout
Menomonie, Wisconsin 54751
(National Clearinghouse for materials related to the profession of
vocational evaluation.)
2. National Rehabilitation Information Center
308 Mullen Library
C.Y.U.
Washington, D.C. 20064
3. National Clearinghouse - Rehabilitation Materials
115 Old USDA Building
Oklahoma State University
Stillwater, Oklahoma 74074

Another resource that may prove to be of great value in securing guidance for development of inservice training activities relating to vocational evaluation would be state and local vocational rehabilitation facilities/agencies with whom some educational agencies have been able to develop working relationships. Personnel from these agencies should be able to assist in developing systematic and effective vocational evaluation programs.

Provision of such training may best be on a regional basis, possibly by using some of the aforementioned resources in conjunction with other resources from already existing vocational assessment and evaluation components and programs in the state (to include vocational rehabilitation). Joint cooperative efforts such as these can be valuable in the development of comprehensive, relevant, effective programming. Support for the regional emphasis on instituting vocational evaluation/assessment, inservice training, would be the opportunity to bring together representatives from vocational education, special education, and vocational rehabilitation in a more cooperative series of efforts. This group effort should help in insuring that legal and professional responsibilities are being met for those individuals having special needs. This group approach would use the

experience of local practitioners in combination with training resource personnel sharing with each other their already existing efforts as well as problem-solving those issues which remain to be addressed.

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Vocational Assessment: Special Education's Responses to the Career Needs of Handicapped Youth

by

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Vocational assessment, a long time hallmark of vocational rehabilitation has filtered down to the school level focusing on younger 'clients' in an attempt to meet the career needs of handicapped adolescents. There is a great deal of conjecture as to what factors have created this trend. Some say this trend is a direct result of vocational rehabilitation's inability to serve all of those who need and qualify for service (Bowe, 1979). Others contribute this trend to changes in rehabilitation's emphasis on the type of client served, program accountability related to case closures and resulting funding patterns which have forced rehabilitation out of the schools. All of these factors contain some degree of truth and justification as related to the present service delivery structure, but the often overlooked reason for this trend relates to differences in need and purpose. The essence of this difference reverts back to the basic intent and thus structure of the vocational assessment process.

The most commonly cited definition of vocational evaluation (Bitter, 1979; Pruitt, 1977) was developed in 1972 at the Tenth Institute on Rehabilitative Services as follows: vocational (work) evaluation is a comprehensive process that systematically utilizes work, real or simulated, as a focal point for assessment and vocational exploration, the purpose of which

is to assist individuals in vocational development. This definition would also apply to vocational assessment at the school level except for one minor addition which translates into a major shift in focus. Vocational assessment at the school level would systematically utilize preparation for work, real or simulated, as a focal point for assessment and vocational exploration. . . in vocational development. This focus relates to the difference in service emphasis between rehabilitation and special education. "Rehabilitative services are designed to restore a person's productive capacity or his ability to manage his own affairs in part or entirely as he had previous to his incapacity" (Conley, 1979, p. 71). Education or habilitative services are designed to initially provide developmentally sequenced instruction which will enable a person to reach his productive capacity or ability to manage his own affairs. Vocational assessment at the public school level should emphasize preparation for work. The remainder of this article will focus on the difficulties encountered in setting up and effectively utilizing vocational assessment services, as well as recommendations to help alleviate these problems and concerns at the public school level.

ISSUES AND CONCERNS IN SCHOOL-BASED VOCATIONAL ASSESSMENT

There have been a number of difficulties associated with the operation of school-based vocational assessment centers. These difficulties often stem from three major sources. First, there is a lack of expertise in the area of vocational assessment at the school level. Of the three major contributors and benefactors, special education's expertise lies in the realm of academic testing for placement and programming purposes. Vocational education relies on an informal and sometimes competency based assessment process depending on an individual teacher's need and subject area. The concern is more related to skill attainment and successful entry into the

labor force. Vocational rehabilitation, the probable source of the greatest information, is considered apart from the problem, i.e., an after school resource. In general, there is a lack of understanding as to rehabilitation's role. The provisions of rehabilitation services have become far removed from the school system because of their changing focus and interdisciplinary efforts.

Each of these disciplines have critical information and knowledge to share when cooperatively developing the vocational assessment process. Special education can contribute testing know-how, developmental programming and support service skills. Vocational education can supply knowledge about the job market, employment trends and entry/exit level criteria for successful vocational skill training. Vocational rehabilitation can supply vocational assessment and job analysis expertise. The difficulty is that time is rarely set aside to bring these critical service providers together to discuss their needs, share their areas of expertise in the development of a school based vocational assessment process and delineate how this assessment will integrate into their respective programmatic goals. Ideally, those who are supposed to utilize and benefit most from the vocational assessment process, must have a vested interest in the integration, relevance and programmatic gain in the total assessment process. To efficiently and effectively operationalize this service, administrators, vocational educators, special educators, counselors and significant others must internalize or buy into the process to make it work. If one does not have the initial involvement and commitment of relevant staff in the development and problem solving aspects of the vocational assessment process, a credibility gap is created which takes a great deal of time and effort to overcome. The vocational assessment process then becomes an additional service

instead of an integral part of the career development process for students who are handicapped. Unfortunately, there are usually administrative pressures, often precipitated by legislation or avoidance of litigation, to get the process underway immediately if not sooner. Budgetary and staffing considerations also play a role in this push. But it is counter productive to attempt to immediately satisfy administrative needs at the sacrifice of laying the necessary groundwork to integrate the vocational assessment process into the service structure.

This initial lack of available expertise at the system level coupled with the paucity of university level vocational/special education programming, translates into a second source of difficulty, that of establishing a philosophical and structural foundation based on school and community needs for the system. When conceptualizing a model for the vocational assessment of special needs individuals it is critical to have a clear understanding of the specific purposes and rationalizations for the existence and operation of the program (Stodden, 1980). By addressing: why there is a need for the assessment, what will specifically be measured, how will this information be measured, who will participate in the assessment process, how will this individual be referred, where will this assessment activity take place, what events or activities will take place, what is the sequencing/timing of these events, who will conduct the assessments, how will the results be utilized and how much this will cost, the foundation for an effective process will have been laid.

The resource vacuum that many school systems deal with relates to the third major source of difficulty in establishing school-based vocational assessment activities for individuals who are handicapped. There are few models of school-based vocational assessment activities based on a strong

programmatic foundation where there is a complete and effective facility within the school system. Those school-based vocational assessment models that are presently functioning seem to select components of existing rehabilitation models without consideration or an understanding of their own needs within an education setting (Stodden, 1980). Within this structure comes the difficulty of relating findings to programmatic needs and justifying placement decisions on vocational assessment results. As a result, the vocational assessment centers often address more of an administrative and compliance posture rather than that of a developmental change agent role. School-based vocational assessors often relate that the position carries no 'clout' in assisting to carry out recommendations. There are a number of other physical and process concerns that are an outgrowth of the three major difficulties stated above.

Process Concerns

There is a legitimate concern related to how vocational assessment is viewed. Often administrators view the assessment process as meeting the total career needs of an individual who is handicapped. Now you know what you can do, the obligation is met, let's get back to meeting graduation requirements. The special educator often views the vocational assessment process as a replacement for career exploration. Now you know what you want to do, the obligation is met, let's get back to learning functional life skills or remediation of academic skills-you're two weeks behind already! The vocational educator often views the vocational assessment process as meeting vocational education's obligation to providing access to the world of work. Now you know what you want to do, the obligation is met, let me get back to the kids who can really make it. All of these responses reflect only a portion of the feedback, but could be avoided or

lessened if expectations were established in the beginning and these individuals were brought into the development of the vocational assessment process.

There is another concern related to how vocational assessment is viewed. A majority of the vocational assessment programs at the school level have focused on the high school student who is close to graduation. This trend meets a need of the county to address the needs of students who are nearing the end of their school involvement and still lacking a sense of career direction. This response presents two problems. First, it is quite optimistic to expect a one shot evaluation, so late in the student's school career, to make a significant impact on career aspirations and direction. The students who enter these evaluations vary in backgrounds but are similar in their low degree of career awareness and exploration. They lack the appropriate readiness skills and behaviors to gain the most possible from the vocational assessment. This certainly points out the school's failure (grades K through 12) to provide and infuse career education into the educational process. A second problem is that in order for the assessment process to be most effective, it must be more than a collection of product data and be viewed as an integral part of the student's long term career development process (Sitlington, 1980). The evaluation, most importantly must collect process data which contributes to career development and reflects community needs. The students and sending teachers must not end up with the attitude that vocational assessment has taken place to/for them. If the vocational assessment process is truly part of the career development process then the assessment and recommendations happen with them in a decision making milieu. Parents, teachers and students should be intimately involved in utilizing the assessment process and results in developing and supplementing the development process.

The other process concerns involve assessment materials and staffing considerations. A number of the commercial systems are not specifically designed for the handicapped and often need modification and adjustment to help obtain unbiased assessment results (Stodden, Casale and Schwartz, 1977; Stodden, Ianacone and Lazar, 1979). There has been a great deal of concern regarding the appropriateness of norms and scoring procedures. Many of the samples are one trial samples which offer little opportunity to develop strategies to perform the task. In addition to these operational concerns, many of the commercial systems have to be purchased as a complete package. The result is that pieces of various systems are utilized in an attempt to best reflect the local labor market. This creates a sizable waste of funds since the unused portion of the system is then set aside or stored and seldom used. There has been a trend to develop individual work samples which can be specifically tailored to training and employment opportunities. Additionally, there has been an effort to focus the evaluation process as close as possible to the work setting. Increased emphasis has been placed on using the vocational classroom and employment situation as assessment sites.

One final consideration is that of staffing. There is a need to recognize that the skills and experiences of the vocational evaluator are of extreme importance in determining the success of a school-based evaluation center. This person should be able to research local labor needs, have intimate knowledge of vocational course offerings, communicate programmatic needs and concerns of the handicapped, be competent in vocational assessment, develop work samples based on detailed task analysis, and other sundry duties related to effective operation of the vocational assessment center. A great deal hinges on the competence and experience of the

evaluator. The selection of a person trained in vocational/special education is certainly a critical element.

Organizational Concerns

The basis for organization and development of a program relates highly to the success of the program. All too often, funds are suddenly available at the end of a funding cycle, which must immediately be spent, and a vocational evaluation system ordering spree takes top priority. Commercial systems offer a fast and easy avenue to quickly spend a large sum of money, and often, the best salesperson or the one with the best timing will facilitate the county's immediate need. Initiating a vocational evaluation center predicated solely on funding expenditure deadlines will only program the center for failure. Materials or systems often do not represent the local labor market or the vocational offerings. As a result, the purpose and intent of the evaluation process often becomes reactive to the availability of systems and materials. The evaluator must then promote the system(s), possibly a system he is not comfortable with philosophically; to staff and students. There are a multitude of problems in securing staff involvement and support when they feel that the assessment process was thrust upon them.

There are presently a number of ways to approach the vocational assessment needs of individuals who are handicapped. The most valid approach involves the development of individual work samples or on-site evaluation processes based on the combined needs of the student and the community. The vocational assessor must also be skilled in integrating or combining the commercially available assessment materials with locally developed, geographically related materials. The difficulty lies with finding

an individual who is able to take charge of developing these relationships, create reflective sampling materials and act in a liaison capacity to insure the effective utilization of assessment findings. Personnel preparation programs are not presently addressing the training of this type of professional. In addition, a majority of commercial systems presently available have problems reflecting the specific needs of the community, while at the same time effectively dealing with the special concerns and capabilities of the handicapped population. The vocational assessor must be able to make these modifications.

A second organizational aspect is that of numbers. Once this large amount of money is spent on materials, systems and personnel, there is a great deal of pressure for immediate startup and movement of students through the program, regardless of the effect upon program quality. It is agreed that the assessment center should be cost effective but not at the expense of undercutting the effectiveness and intent of the center.

Although a great many problems exist, it must be remembered that the field is still in the infancy stages. The aforementioned problems and concerns can all be remedied and/or avoided. The remainder of this article will focus on corrective considerations when addressing the major barriers to effective vocational assessment and essential considerations in establishing a vocational assessment center.

ESTABLISHING A STRUCTURAL BASIS

As related in the process and organizational concerns of present assessment centers, it is heavily stressed that a number of difficulties can be thwarted by cooperatively establishing a well delineated philosophical and structural base for the vocational evaluation process. A number of factors affect the final composition of the assessment process; such as,

purpose, structure, budget, personnel, population and role definition. The following charts and lists should assist in defining the basic structure within the assessment process. There are three basic questions to be answered related to purpose, structure and location.

Figure 1. PURPOSE

What is the intent of the assessment? The response to this question will also address when the assessment would be most appropriate.

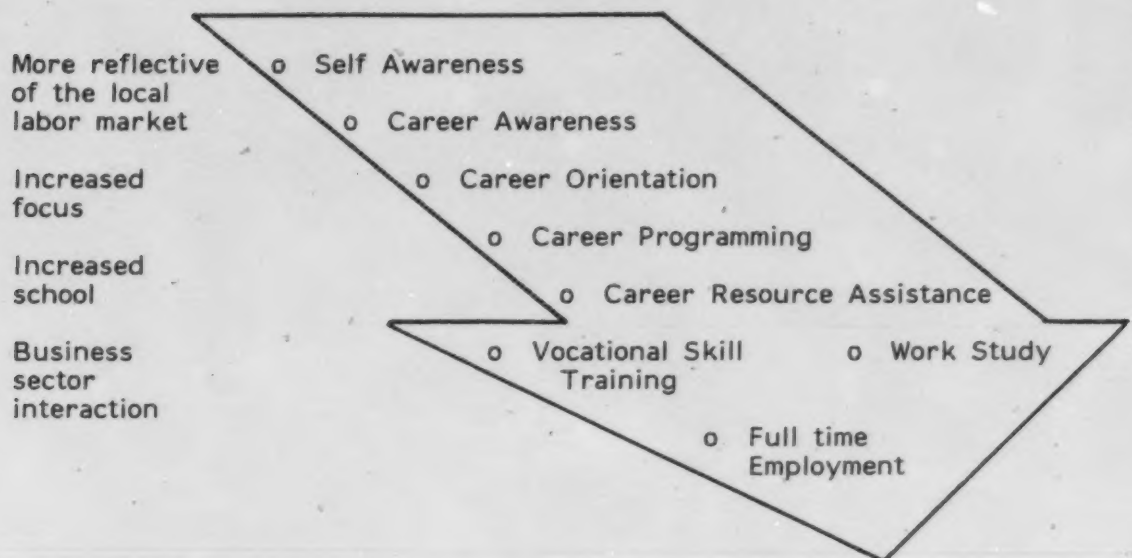


Figure 2. STRUCTURE What information am I seeking? How will I go about obtaining my information? The response to these questions is dependent on the specific purpose of the vocational assessment.

Exploration to placement

Increased level of cooperation needed

Increased level of expertise to

- Implement
- Administer
- Organize

Increased validity of results

Increased specificity of recommendations

o Commercial Work Sample Systems

o Personality Tests

o Interest Inventories (general)

o Interest Inventories (career)

o Aptitude Tests (written)

o Aptitude Tests (performance)

o Commercial Work Sample Systems (worker trait)

o Locally Developed Work Samples (situational)

o Assessment in Vocational Training Site (long term, short term)

o Assessment on Job Site (situational)

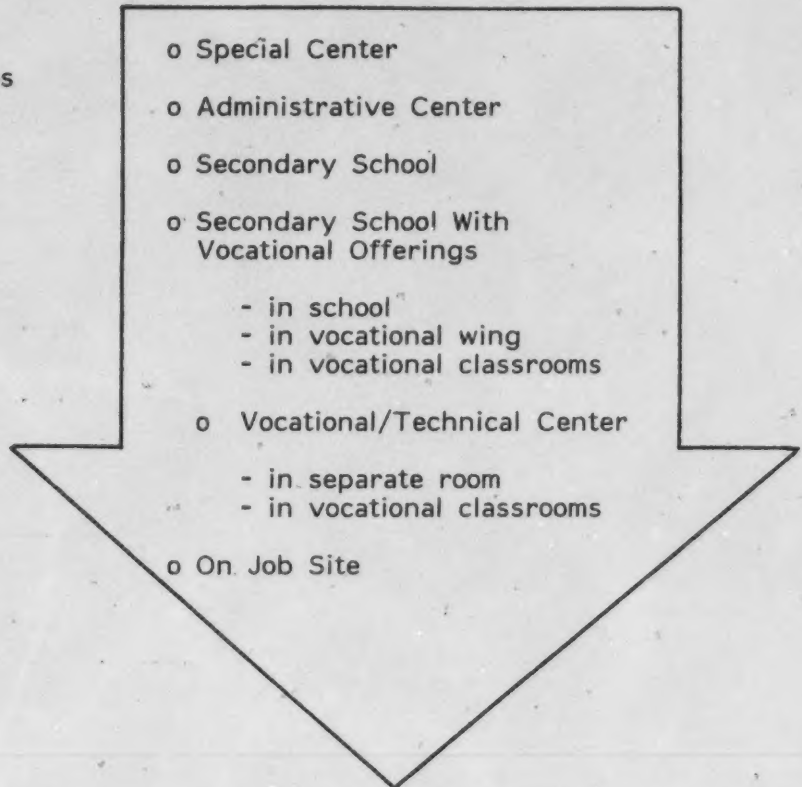
Figure 3. LOCATION

Where should this evaluation take place? The response to this question is dependent on the specified purpose and structure of the assessment process.

Better accessibility
to vocational resources
and expertise

Closer to
work situations

More positive
image related to
actual work
environment



The preceding sequencing of service delivery and assessment options should provide the basis for establishing the intent and basic processes for vocational assessment. The conceptual map for the vocational assessment delivery of services should vary with and within each school system. The next step is to delineate procedures, lines of communication and the necessary involvement which will facilitate achieving the intent. The following section will address three critical areas in helping this process to work.

FACILITATING THE ASSESSMENT PROCESS

Vocational assessment, as an integral component in the total educational and career development program, demand involvement, commitment, interaction and the expertise of many professionals. Vocational assessment is not a singular service, but rather a comprehensive process, involving an interdisciplinary team to assess an individual's vocational potentials, training and placement needs (Brolin, 1976).

Our expectations, often, are that vocational assessment will supply the solution to the many problems and questions educators, parents and students postulate about a vocational/career direction. We tend to view the vocational assessment team as the information-gatherer and decision maker, holding the ultimate vocational and educational future of the student within the framework of a final report. This is a fallacy. Within the sphere of the vocational assessment model, exists the tools and the opportunity to collect an abundance of information at a central point that will assist in the career decision making process.

Developmental Cooperation and Commitment

For the vocational assessment team to effectively and efficiently devise and implement recommendations into an operative plan, vocational and special education must be invited to become interactive ingredients within the process. Their participation and involvement will help to insure that the vocational assessment goals will be planned and organized through an appropriate and systematic continuum of services which meet the career needs of the handicapped student. The most effective means of creating support and utilizing the skills of vocational and special educators is to include them in the development of the assessment process and organization of the assessment site. Incorporating special and vocational involvement, at this point, will serve not only to initiate communication and commitment, but more importantly will assure a productive assessment unit, meeting the needs of the population and community, while intensifying the overall potential and capabilities of the vocational assessment process.

In order to foster this interactive power, the vocational assessment team must create the atmosphere of involvement and commitment during the first stage of the assessment program. Thus, vocational and special education will feel that they are a part of the process, or that they have a stake in its success. Initial involvement should focus on information sharing of possible problem areas or concerns about placement and conceptualizing the role of the assessment center.

Vocational educators should serve as consultant specialists in supplying the assessment process with input on the community and the nature of the labor market needs. They can further assist in the planning, selecting and developing of work samples and situational assessment sites, in an effort to guarantee a positive match between events within the assessment

center and the world of work. Vocational educators can present a realistic and accurate picture of skill requirements for specific vocational training areas. This information can be used in organizing instructional and programmatic support within the framework of special education.

Special educators, also, must become invested participants in the initial stages of the assessment process. Their responsibility can take root in a preassessment survey of student interests, abilities and skills as related to career and even specific occupational requirements. Their participation can incorporate student development of critical readiness, awareness and behavior skills. Such preparation will prove essential when developing the assessment and training plan, with subsequent potential for influencing successful performance in a skill training program and employment. Student involvement within the total process will be maximized if they have been provided activities encouraging understanding and awareness of themselves, their interests, values and skills, as they relate to work and society. Such preparation will encourage student participation in the decision making process, resulting in responsible commitment to the program plan (Stodden, 1980).

It is important to develop and expand upon this beginning seed of involvement, by providing an awareness of the purpose and function of vocational assessment. The vocational assessment staff must prepare orientation training modules for vocational and special educators, resource and support personnel, students and parents, so as to increase their awareness and understanding of the total assessment process.

Operational Communication and Coordination

Once the student's interests are determined and skills are assessed the vocational assessment team is responsible for compiling the information

into a final report format. For the vocational assessment process to progress in a uniform, sequential fashion, it is essential that the final report or a shortened preliminary report be available soon after the student's assessment is completed. Once this information is assembled, the program planning stage commences, and the team of assessors, vocational and special educators, parent, student and counselor becomes engrossed in the process of:

"reviewing the assessment information,
establishing a training plan,
initiating the training program, and
evaluating the training program and making
changes if necessary"

(Brolin, 1976, p. 163).

There are a number of resources available on report writing techniques and formats. It is important to realize that there is not a format for a report which comprehensively addresses all individual needs and circumstances. Therefore, the utilization of report recommendations must be specific and all persons must participate in the interpretation of the results and recommendations to prevent misunderstandings and gaps in the link of implementation (Pruitt, 1977).

The team of vocational, special and resource personnel must join forces with the assessment staff in pooling their information, in a process of synthesizing and integrating vocational assessment findings, classroom and home observations, etc., to construct a plan with a specific focus on objectives leading to appropriate placement. The team should be concerned with examining the vocational interests, assets and limitations and then mapping immediate and long term objectives, with necessary services and

responsible persons designated. Once a plan of action has been established it should be incorporated into the individualized education plan (IEP). This provides additional indication of mutual understanding and professional responsibility within the team decision (Sitlington, 1979). Vocational educators and special educators must determine what support personnel would be required to supplement the training program. The vocational assessment staff should help in specifying available resources and define present funding sources to assist in obtaining professional resource assistance.

When student placement is made, responsibility and involvement as a team does not end. Rather, the placement is productive only if it is translated into specific educational and teaching strategies to modify the instructional needs identified in the assessment report (Razeghi, 1981). Vocational education has the responsibility of informing the special education teachers of skills being taught and what they can do to support the instruction in areas such as occupational terminology, math, measurement, reading, etc. At the same time, special education has the responsibility of providing requested support instruction, serving as resource and instructional strategists (Razeghi, 1981). Both share the joint responsibility of modifying vocational instruction and materials to meet the needs of the student, and for monitoring and evaluating the progress and performance of the student in the program (Erickson, Wentling, 1977). This calls for varying types and degrees of information from all those involved in the student's career development planning.

Because there needs to be such an intricate exchange of information incorporated into this system, one must be careful that the communication lines do not become confused and haphazard. Teachers, evaluators and

resource personnel are absorbed in a variety of job-related tasks, responsibilities and time restraints that can prove to hinder progression of interdisciplinary communication and effort.

An essential role of vocational assessment liaison (VAL), should be created to coordinate all planning activities between the assessment center, school and community. The VAL should be charged with facilitating and maintaining communication prior to, during and after the assessment, so that each person may work as a team member in providing the most appropriate career/vocational options for all students. The VAL can enhance this communication between school personnel, guidance personnel, special education, vocational education, career education, administrators, parents and outside agencies, e.g., vocational rehabilitation (Maryland, 1980). The VAL should be in a position to observe and evaluate all facets of individual and team responsibilities and be cognizant of problems before they become barriers to program functioning. In such cases, this individual can work with expediency on program resolution. The VAL, then, becomes the catalyst and coordinating agent in the team relationship, supporting and reinforcing joint decision planning and problem solving tactics.

Throughout the total process, but of particular note at this stage, is the student's relationship within the team network. As educators, we make reference in the IEP to student's ability to function independently. This, also, should be a goal of the vocational assessment model. The student should be an active participant in the assessment planning and decision-making stages. Special and vocational education teachers and the assessment staff must establish a trusting and accepting relationship with the student, for it is this rapport that will be the basis for interaction

continuing over the entire vocational assessment process (Shada, 1980). The team must communicate the purpose and goals of assessment and incorporate the student's statement of interests, abilities and needs with that of the assessment data in devising a plan of service. The team must share and discuss findings with the student and interpret them in light of their implications. Just as we have stressed the inclusion of vocational and special education in the formulation of the assessment model to birth commitment; so too must the student have input in the process for program acceptance, commitment and participation to evolve.

Process Assessment and Modification

Program evaluation must be an integral component of the vocational assessment process model. Evaluation has been defined as "a set of procedures to appraise a program's merit and to provide information about its goals, activities, outcomes, impacts and costs" (Fink and Jacqueline, 1978, p. 1). Program evaluation serves as a method of providing input to aid in improving and updating program services for students and to assist team personnel in the total planning and decision-making process (Wentling and Lawson, 1975).

Program evaluation has a two-fold purpose. The first is to meet the present demand for accountability within the school systems, where increased emphasis is placed upon the evaluation of goals, purposes, personnel, and numbers served. Evaluation is a means of justifying one's existence. The second, which has greater ramifications, is the need for feedback to provide input into the total program picture so that procedures, programs and services can be modified to enhance efficiency and effectiveness (Altfest, 1975). The process model is not complete unless methods for monitoring and evaluating the program are designed within the

program objectives. Evaluation involves not only determining if the stated goals and objectives are being met, but also if progress toward student goals and objectives are being met.

Techniques should be established to collect data from a variety of sources; e.g., vocational and special education programs, parents, present students in training programs, graduates, employers, current community labor trends and final report recommendations. This information greatly contributes to program development, because it is the source for process modification to update and improve upon the model, equipment, instruction, personnel effectiveness and future student placements. With the implementation of needed program modifications the vocational assessment model is better prepared and equipped to train students to successfully enter the world of work.

SUMMARY

The intent of this article is to provide a framework to identify and analyze barriers that inhibit effective school-based vocational assessment. The issues and concerns discussed are often reinvented each time a school system attempts to implement a vocational assessment center. Through recognition of the need to establish a strong structural base and effectively utilize personnel expertise within the system, these efforts could be redirected in refining, integrating and individualizing the vocational assessment process.

It must be stressed, that the vocational assessment process demands cooperative efforts and commitment from the first stages of development, to the implementation, operation and on-going evaluation in order to encompass all aspects of individualized programming and facilitate appropriate

placement. Following these guidelines, school systems can become knowledgeable consumers and dispensers of vocational assessment within an integrative career development process for individuals who are handicapped.

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Planning Vocational Assessment Activities within Educational Settings: An Interdisciplinary Focus with Handicapped Students

by

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INTRODUCTION

Until recently, programming practices in vocational evaluation have been largely manifested within the field of vocational rehabilitation. The traditional rehabilitation process has been oriented toward the retraining needs of adult clients, as they are prepared to return to the world of work. The instrumentation, measurement technology, and focus of operation has been to determine the vocational capability of the client and predict success or failure for the individual within specified occupational areas. With the advent of Public Law 94-142, Public Law 94-482, and Public Law 93-112, and the increased desire for appropriate vocational services by individuals of many disability groupings, new demands have been placed upon those conducting vocational evaluation activities. Mandates for the provision of appropriate, least restrictive educational services, ages 3 through 21, includes career/vocational programming for the handicapped student. The vehicle designating appropriateness of career/vocational programming is the individualized educational plan (IEP). The necessary information upon which to develop the individualized educational plan is dependent upon a valid and appropriate vocational assessment process.

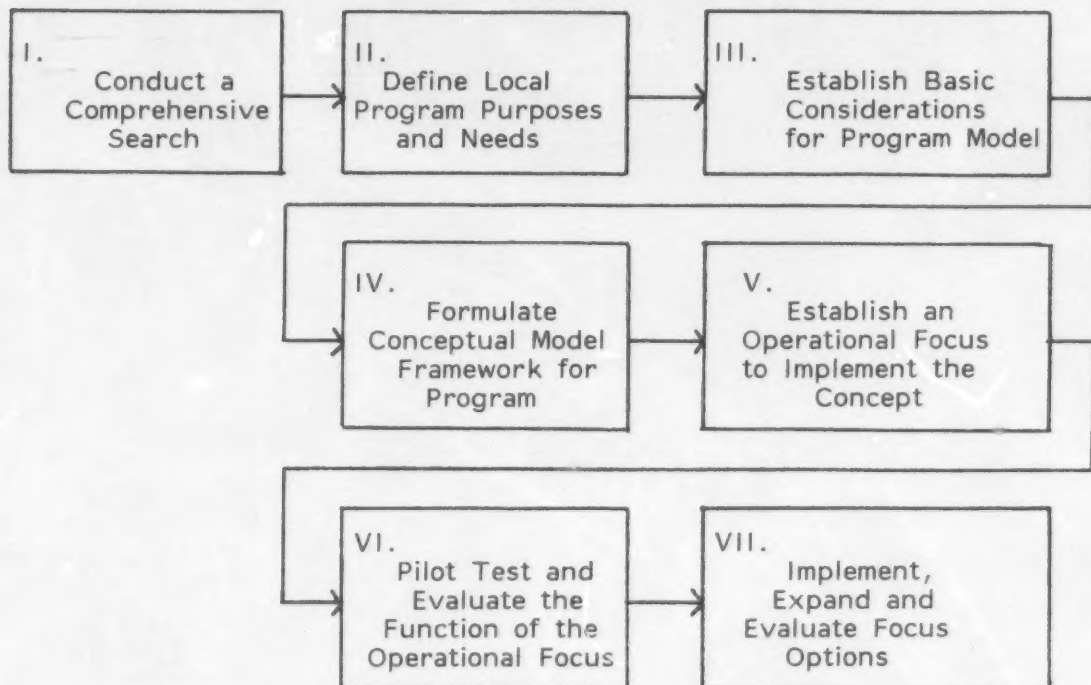
Several human service and community disciplines interface in the delivery of career/vocational services for the handicapped student. The task of developing a vocational assessment process requires the interdisciplinary cooperation of educational personnel, rehabilitation and vocational personnel, and relevant persons reflective of the community and the world of work. The team composition must account for the career development needs of the handicapped student, the operational needs of educational and rehabilitation settings, and the world of work demands of vocational training programs. Each of the disciplines possess resources contributing to the development of a vocational assessment process. Likewise, each discipline may be affected by team placement and programming decisions resulting from the completed assessment process.

A review of school based vocational assessment efforts (Stodden & Petzy, 1980) revealed that programs were often structured according to staff decisions for selection of methodology and instrumentation, rather than a developmental planning process of defining basic needs and purposes. The resulting program models often consist of a scattering of instrumentation and commercial work sampling systems reflective of the needs of traditional rehabilitation evaluation settings. Other educational settings meet their vocational evaluation needs by sending handicapped students out to a rehabilitation center, isolated from personnel involved with programs of education and training. Such vocational evaluation efforts often involve the participation of different disciplines (special educational and vocational rehabilitation), but include little or no interdisciplinary coordination or planning.

PROGRAM PLANNING AND DECISION MAKING

The existence of true interdisciplinary planning would appear necessary for educational personnel to develop an understanding of their own needs and objectives, as related to the needs and purposes of other interfacing disciplines within the assessment/evaluation process. Stodden and Petzy (1980) explored the basis for a developmental flow of program planning and origination events that might serve as a decision making vehicle to integrate the needs and purposes of each discipline participating in the assessment/evaluation process. As reported in Stodden (1980b), a developmental decision making process for program planning and origination consists of the following events: (Figure 1)

DEVELOPMENTAL FLOW FOR PROGRAM ORIGATION



I. Comprehensive Search

The purpose of an initial comprehensive search is to determine an information base for role definition within the interdisciplinary planning team. Also, the search encourages the development of a systematic review of needs and resources for each discipline interfacing the vocational assessment/evaluation process. This might include an assessment of the data needs of program planners, the readiness needs of the handicapped student, or the training and employment needs of the community and rehabilitation personnel conducting follow-up services. The search should also investigate the nature and existence of different program structures within the school and the community that might be accessed for vocational data collection purposes. Examples of the kinds of information that might be gathered in a comprehensive search are as follows:

- Administrative structures and key persons within the schools and agencies interfacing the assessment process.
- Student service delivery models, groupings, and existing program structures.
- Staffing patterns.
- Existing programmatic and material resources.
- General school and agency logistics.
- Present structures for the evaluation and placement of handicapped students.
- General school and community relationships and the nature of their functioning.
- Human and materials resources of parents and other relevant persons.
- Current needs and purposes for all agencies and schools involved with the assessment process.

II. Definition of Purposes and Needs

Each service discipline participating on an interdisciplinary planning team represents the needs and objectives of their specific discipline. For example a representative of special education may have a strong need for finding a secondary school vocational placement for the handicapped student, vocational education may be very concerned about the quality of students recommended for placement in skill training shops, and vocational rehabilitation may have a concern about appropriate readiness skills for job placement. Only team planning and coordination will lead to clarification and understanding of each discipline's frame of reference. Examples of needs that might be identified within an interdisciplinary planning team, are as follows:

- Need for developmental information by prevocational instructors concerned with preparing handicapped students for indepth vocational assessment and skill training.
- Need by vocational instructors to know what program options and specific accommodations are necessary for successful participation of handicapped students in vocational shops.
- Need by rehabilitation counselors to know what behaviors and skills handicapped students will possess when they leave the educational setting.
- Need for specific (valid and reliable) vocational information by IEP team decision makers to assist with appropriate placement decisions.

III. Developing Basic Consideratons for a Program Concept

The formulation of conceptual considerations will provide an underlying basis for building the framework of a conceptual model in which to conduct vocational assessment/evaluation activities. The development of considerations should reflect the purposes of local agencies and schools, the career development needs of the handicapped student, and the current state of the art of vocational assessment/ evaluation. A review of current

programs and research in the area of vocational assessment/evaluation of handicapped individuals (Stodden & Petzy, 1980), brought to the forefront a number of considerations for use in program model development. Some of these considerations, as reported by Stodden (1980a), and Stodden and Ianacone (1981), are as follows:

- that vocational assessment/evaluation must be an integrated part of the total delivery of career/vocational services to the handicapped student. The collection of valid information should reflect preassessment readiness needs of the student and provide developmental growth information.
- that vocational assessment is a student centered, developmental growth process consisting of experiences to increase one's awareness, exploration, and understanding, rather than a strict predictive procedure providing isolated ability data.
- that key validity and efficiency factors contributing to the structure of a vocational assessment model are the assessed employment needs of the local community and the applicable skills of the handicapped student.
- that any vocational assessment/evaluation model must address the legal considerations of Public Law 94-142, Public Law 94-482, and Section 503 and 504 of the Rehabilitation Act of 1973.
- that many standardized assessment instruments and vocational evaluation systems measure one trial learning, thus magnifying the handicapped student's weaknesses on the task.
- that there are key situational factors specific to work roles and these factors can be critical determiners of the interest and performance of handicapped students.
- that vocational assessment/evaluation programs must produce a wide variety of demonstratively useful information which can be accessed and used by several disciplines and the handicapped student.
- that significant contributory factors may influence a handicapped individual's participation and performance on an assessment task. Factors, such as, learning style, physical or sensory limitations, self concept, reinforcer system, and limited awareness of new situations may influence the data collection process.

IV. Framework for Conceptual Model

The formulation of a conceptual model framework is determined by drawing a systematic relationship between local programming needs and

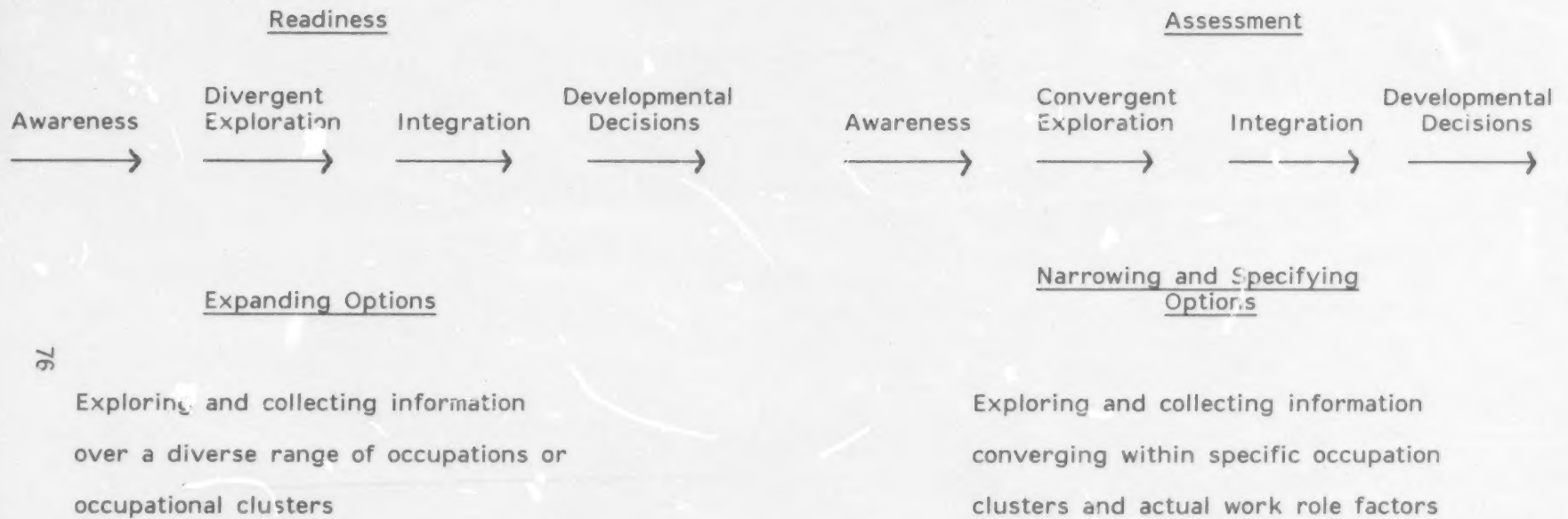
purposes, and the basic conceptual considerations developed by the interdisciplinary planning team. The structure and content of the model will provide a point of focus upon which to base decisions about key operational variables, such as, when to conduct vocational assessment activities, how long should assessments take place, what specifically should be measured, where will assessment be conducted, who will conduct assessments, and who will be assessed.

Stodden (1980a), and Stodden and Ianacone (1981), discuss a three component conceptual model for the vocational assessment/evaluation of handicapped students. The model provides structure for the developmental collection of vocational information within a variety of educational and work settings. The model structure conceptualizes vocational assessment/evaluation as a series of developmental learning and data collection events where the handicapped student (1) increases awareness and understanding of interactions between the self and the work environment at a general occupational cluster level (readiness or divergent exploration and assessment) and (2) then moves toward finer level decisions regarding participation on specific tasks that yield indepth situational information (convergent exploration and assessment). (See Figure 2 on page 76)

Concern is for increased exploration and understanding, assisting the decision making process for the handicapped student and those in the role of planning and coordinating occupational programming efforts. Flow through the conceptual model components demands interdisciplinary cooperation and coordination of the assessment activities and the evaluation/application of information for different service providers. The framework and basic considerations for this conceptual model will be used as a discussion vehicle for developing the remaining program origination events in this paper.

Figure 2

DEVELOPMENTAL ASSESSMENT



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V. Operational Focus and Implementation of Concept

The implementation of a program concept can take a variety of forms depending upon variables, such as, existing program structures, resources, and functioning levels of students. Interdisciplinary planners must be concerned that the conceptual model and implementation focus remain consistent when developing and deciding upon a number of operational variables. Following is a listing of operational variables, with considerations for implementation, based upon the discussed conceptual model.

1. Time frame for Vocational Assessment of Handicapped Students

- developmental assessment activities should begin during the junior high school years.
- the length of time in which vocational activities take place is determined by the developmental decision making needs of the handicapped student and the time line requirements of the team program developers.

2. Setting for Assessment Activities

- the least restrictive, most efficient and valid situations to collect vocational information exist within the handicapped students' normal program of activity. Such settings may include curriculum areas within academic classrooms, industrial arts shops, resource rooms, work sites within the school, vocational training programs, and community based work sites (Stodden, 1980b). Assessment setting options available to an interdisciplinary planning team are dependent upon the situations and resources explored during the initial comprehensive search.
- As indicated in Figure 3 on page 78, assessment settings can be structured in a developmental manner to match the exploration and assessment needs of the handicapped student.
- An initial focus consists of assessment situations structured within educational curriculum areas. A possible secondary focus for assessment settings consist of accessing work roles that occur as a part of the normal operation of an educational facility. A structured assessment situation within an actual work role could yield opportunities for more indepth exploration and assessment. Also, the handicapped student would have an increased opportunity to experience situational variables specific to the work roles accessed as assessment situations.

Figure 3
ASSESSMENT FOCUS

STRUCTURING OF ASSESSMENT SITUATIONS WHICH WILL DEVELOPMENTALLY YIELD
INFORMATION ABOUT THE STUDENT IN RELATION TO THE WORLD OF WORK

I
INITIAL FOCUS

Curriculum areas with the
student's normal delivery
of educational services

II

SECONDARY FOCUS

Work roles and situations
that make up the normal
operation of educational
facility

III

THIRD FOCUS

Work roles and situations
within the local community

Developmental Collection of Information

English
Math
Social Studies
Art
Music
Industrial Arts
P.E.
Extracurricular

Business Services
Maintenance
Food Services
Human Services
Building Repair
Vocational Training Programs
Community Programs

Community needs as
determined through a
market analysis

- A third focus for developing assessment settings is the immediate community. Those interdisciplinary planning team members concerned with the development of community assessment situations need to consider the availability of employment roles, the transportation and supervision of students, as well as, the willingness of employers to participate in the effort. The benefits of a community assessment focus could be valuable to the handicapped student providing indepth situational exploration and assessment, as well as, contacts for later training and employment.
- As the interdisciplinary team explores different setting options for collecting vocational information, they may find that for any given setting, there are endless possibilities. A guide for structuring the process of defining and expanding assessment setting options, is to access information initially collected through the comprehensive search of needs and resources. Many needs may be addressed by accessing and restructuring existing facilities, programs, and materials.

3. Who will conduct assessments?

- Vocational assessment information might be efficiently collected by persons in roles that interface with the handicapped student's career development process, and those with knowledge of the world of work and assessment practices.
- Such individuals may be teachers, counselors, parents, other relevant persons and students themselves. An assessment situation, structured to yield vocational information, must be constructed to insure validity of process and content, as well as, accountability for reliable data collection guidelines.

4. How will information be collected?

- Assessment situations within educational curriculum units can be structured to yield student performance of skills and behaviors, indirectly and directly related to worker behaviors and skills found in occupational groupings. The collection of vocational information occurs as the handicapped student performs analyzed tasks within different curriculum areas and work settings. The consistent gathering of information will expand the initial baseline readiness data toward an evolving decision making point in the student's development. The actual collection of vocational information occurs through systematic, critical observation and structured rating by individuals supervising student performance on the task. Vocational information collected in several assessment situations and over a sufficient time period is

then formulated and evaluated for use by interdisciplinary team decision makers.

5. What information will be collected?

- As the handicapped student performs analyzed tasks within curriculum areas, ratings are conducted for factors inherent with each step of the task. Student performance on the task allows for exploration of personal values, interests, and needs, as related to task factors and characteristics defined in each assessment situation. The assessed variables can be grouped into levels of general occupational (those skills and behaviors situational and applicable to the world of work) and specific work role skills and behaviors having direct relationships to factors in occupational areas. Occupational relationships can be established for each assessment situation through use of existing exploratory guides, such as, the Guide to Occupational Exploration, Dictionary of Occupational Titles, and the Occupational Outlook Handbook.

VI. Evaluation of the Operational Focus

After analyzing assessment situations and formulating rating instrumentation for each situation, it is necessary to conduct a field trial, evaluating the effectiveness of drawing occupational information from the setting. The following are concerns that may be evaluated during an initial field test of an analyzed assessment situation:

- that assessment situations (series of analyzed tasks) can be identified and analyzed within curriculum units and work roles.
- that occupational characteristics can be factored from a series of educational and work tasks.
- that classroom instructors and other relevant persons can direct an analyzed task without distorting the involved occupational factors.
- that classroom instructors or other relevant persons can identify occupational characteristics through critical observation of student performance on a task.
- that student performance information on a structured assessment task will correlate with other testing measures and the individualized education profile.

The pilot test of structured assessment situations should, also, direct itself toward initial concerns of reliability for data collection instrumentation (could be contingent upon appropriate inservice activities for those persons collecting data) and validity for the content and process of the analyzed tasks. These concerns should be closely monitored as implementation of the process begins for each assessment situation.

VII. Expansion of the Assessment Focus

Upon implementation of the initial focus, the interdisciplinary planning team should continue the process of exploring, analyzing and expanding assessment options. As indicated in Figure 3, expansion toward a second and third setting focus is necessary for the exploration and data collection of a more indepth, situational nature.

OUTCOMES

1. The structuring of a developmental series of events (steps) for the origination and planning of a vocational assessment/evaluation program will yield the following beneficial outcomes:
 - The vocational assessment/evaluation process is planned, developed and monitored by an interdisciplinary team of individuals interfacing the handicapped student's career/vocational development process (academic teachers, vocational instructors, counselors, administrators/program planners, rehabilitation counselors, special educators, parents, employers, and relevant others).
 - The key service providers are channeled into the planning process, availing their expertise and resources to the data collection and evaluation process.
 - The basis for interdisciplinary accountability is structured throughout the service delivery process by total participation of discipline members (the determination of critical readiness and prevocational skills for preparation in the earlier grades, facilitation of planning for vocational skill program needs, information for the coordination of vocational rehabilitation roles in skill training, job placement, and followup).

2. Through the use of the operational focus of infusing the vocational assessment process within existing programs and services, some beneficial outcomes are apparent:
 - requires minimal add-on expenditures for new facilities, equipment, space, time schedules, personnel, and transportation services.
 - the assessment process can be tailored to fit local needs and resources (account for differences between rural and urban settings).
 - due to total involvement by persons interfacing the assessment process, commitment (length of existence and quality of program) to the developed process should be much greater.
 - the infusion of vocational variables into educational curriculum areas should assist academic teachers and others to implement the principles of career education. The consistent collection of data for students should serve as a feedback vehicle, increasing educators awareness of the needs of vocational trainers and the world of work. Such awareness will facilitate handicapped students toward improved readiness skills and behaviors increasing successful participation in vocational skill training programs.
3. The collection of vocational assessment information, over several developmental situations, will provide longitudinal data to assist a process of formulating valid decisions for:
 - those persons planning appropriate skill training options.
 - those persons planning for material and method accommodation within student receiving programs.
 - those individuals teaching readiness and prevocational skills and behaviors prerequisite to assessment and placement.
 - those service providers responsible for related services, such as, employment placement and follow-up.
 - the handicapped student (self-awareness, exploration, and understanding).

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EPILOGUE

This series of policy papers has addressed a wide range of concerns relating to the vocational assessment of handicapped individuals. The issues discussed and the ideas presented have relevance for local, state, and national level programmers in the primary fields of vocational education, special education, and vocational rehabilitation. Many of the issues presented may be of interest to other persons interfacing the vocational assessment process, especially handicapped individuals and their parents or advocates. Much of the interest in vocational assessment activities for handicapped students has occurred as a reaction to mandates for appropriate vocational training. The vehicle for specifying appropriate vocational programming has been designated as the individualized education program (IEP) or the individualized written rehabilitation plan (IWRP). To develop the vocational component of an individualized plan it is necessary to establish current functioning patterns (skills, behaviors, interests, etc.) as related to occupational areas. The collection of valid and reliable vocational assessment information assists the process of determining current functioning patterns for the handicapped person and further assists with the development of appropriate instructional objectives. Further specificity and coordination of vocational assessment information can directly assist the successful participation of the handicapped person within vocational training programs.

The authors contributing to this series of policy papers represent areas of training and focus presently encompassing the field of vocational assessment for handicapped individuals. The papers reflect the traditional and emerging concepts in vocational rehabilitation, viewpoints from the field of special education, and interdisciplinary approaches representing a

combination of rehabilitation, special education, vocational education, and career development. As vocational assessment struggles to occupy a new role within the individualized human service delivery program for handicapped persons, several cross discipline concerns become evident. Gerald Schneck expressed a number of philosophical, operational, and technical considerations broadening the focus of vocational assessment to more appropriately address the needs of individuals with handicaps. Several of these considerations, as reflected in many of the policy papers, include the following:

- o The lack of a clear definition of purposes and objectives, which have application for a variety of settings, for vocational assessment of the handicapped individual.
- o Some serious difficulties exist in operationalizing portions of traditional evaluation models within large delivery systems requiring services of an integrative and continuous nature.
- o The outcomes of the vocational assessment process must be expanded to interface the programming needs of service providers with the career development needs of handicapped individuals.
- o There is a need to define a systematic process to facilitate interagency (discipline) planning and coordination of the vocational assessment process.
- o There is a need to address inservice training models and competencies required for the changing role of current practitioners in the field and new entry practitioner from other disciplines participating with vocational evaluation activities.

Each of the policy papers in this series addressed one or more of the aforementioned areas of concern, offering new insights and directions for the reader. William Stewart reviewed inservice training concerns, related to the changing focus of vocational assessment. He reviewed a listing of competencies appropriate for vocational evaluators working in an educational setting. A sampling of competency task areas includes:

- o Complete Individual Vocational Evaluation Plans with students.
- o Select and administer assessments, conduct observations and use simulated tasks.
- o Communicate the utilization of data with various planning and programming groups.
- o Assist vocational exploration, access community and school resources.

This partial listing of competency task areas for vocational evaluators working within school settings, reflects a real need for interdisciplinary skills to coordinate the assessment process.

Some of the policy series contributors have focused directly on vocational assessment, as a decision making vehicle, within a setting reflective of education and training. Robert Ianacone and Dorothea Hiltenbrand shared many logistical concerns for developing and implementing a vocational assessment process within a public school setting. Three major areas of concern were:

- o A lack of school based vocational assessment expertise.
- o A lack of philosophical and structural foundations within the public schools for vocational assessment activities.
- o A lack of school based vocational assessment models.

A detailed analysis of these concerns revealed that much of the current school based interest in vocational assessment is from a compliance posture, rather than self motivation to assist handicapped students with appropriate vocational programming. Ianacone and Hiltenbrand further addressed school based assessment programming needs through a discussion of various program development options for initiating an assessment center to be accessed by handicapped students. Some of the areas explored were:

- o A basis for deciding and structuring assessment center variables.

- o The establishment of the vocational assessment process.
- o Developing cooperation and commitment among service providers.

The program development variables presented by Ianacone and Hiltenbrand are expanded upon by the present writer through the presentation of a systematic decision making process addressing the program origination needs of an interdisciplinary team. The developmental flow of program origination events is linked to the process of planning a vocational assessment program to be infused within educational curriculum unit and work role settings within the school and community. The developmental flow of program origination events included:

- o A comprehensive search of needs, purposes, and resources for each discipline participating within the team planning process.
- o A definition and clarification of local program purposes and needs.
- o Determination of basic considerations to assist with decisions for variables within the program model structure.
- o Formulation of a conceptual model framework.
- o Development of operational focus variables to implement the concept.
- o Pilot test and evaluate the function of the developed operational focus.
- o Implement, expand, and evaluate focus options.

The identified concerns and issues, as well as, recommendations and suggestions for planning and implementation have been presented to assist those individuals concerned with the role of vocational assessment in the programming of handicapped individuals. The policy issues discussed in this series are not exhaustive, but they traverse a wide variety of concerns from the viewpoint of individuals representing different disciplines interfacing the vocational assessment process. This presentation of issues

and recommendations provides valuable information for planning, implementing and coordinating vocational assessment programs for handicapped individuals.